

ABSTRACT OF THE DISCLOSURE

The present invention provides methods and systems for restoring communication in a fiber optic network by placing error detection circuitry at the add/drop ports of the network nodes of the network. If the error detection circuitry detects an error condition for a communication signal traversing a normal communication path within the network, the communication signal is rerouted along a restoration communication path that is node and span disjoint from the first communication path. By requiring a restoration path to be node and span disjoint from the normal communication path, error detection circuitry need only be placed at the end nodes of the normal communication path. By allowing each node in the restoration path to dynamically choose the particular channels that can accommodate a particular communication signal at the time of the restoration, efficient use of available resources is gained. The result is a cost effective network that restores communication in times competitive to that of SONET rings.

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